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ABSTRACT

A study examined specific reading competencies after participating in Hmong literacy instruction in an after-school setting in the Thermalito, California School District, grades kindergarten through 4. Control and treatment groups were established to compare the English literacy skills of the Hmong students who participated in 40 hours of primary language instruction with those students in grades kindergarten through 4 who did not receive primary language literacy instruction. The instrumentation was a researcher-designed readiness test for the non-readers of English, and for those students who could read English, California Tests of Basic Skills (CTBS) Comprehension scores were used. Results indicated that the CTBS scores of reading comprehension had to be dismissed as a measure, leaving all students who read above the primer level with no means of evaluation. The Reading Readiness Test, used with the students who could not read or could read at the primer level, showed significant improvement by the treatment group in word recognition. The other components of the readiness test which assessed letter recognition, sound identification and recognition of sight words did not reliably indicate improved performance by the treatment group. Findings suggest that Hmong literacy skills be included in the school instruction program at all grade levels. The success of the after-school Hmong literacy program cannot be measured solely by test performance but is better gauged by the willingness of the students to participate, the desire of the parents to maintain culture through literacy, and the noticeable improvement of self-esteem which is inculcated by becoming literate in one's home language. (Contains 47 references, 5 tables and 2 figures of data.) (Author/RS)

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ABSTRACT

TEACHING HMONG LITERACY SKILLS TO HMONG ELEMENTARY STUDENTS: ITS EFFECT ON ENGLISH READING COMPETENCIES

by

Candace Kelly

Master of Arts in Education

California State University, Chico

Fall 1992

The intent of this study was to examine specific reading competencies after participating in Hmong literacy instruction in an after school setting in the Thermalito School District, grades kindergarten through four. The question of inquiry was whether this instruction would affect English reading. Control and treatment groups were established to compare the English literacy skills of the Hmong students who participated in this forty hours of primary language instruction with those students in grades kindergarten through four who did not receive primary language literacy instruction. The instrumentation was a researcher designed readiness test for the non-readers of English, and for those students who could read English, CTBS Comprehension scores were used.

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The findings revealed that the CTBS scores of Reading Comprehension had to be dismissed as a measure in this study leaving all students who read above the primer level with no means of evaluation. The Reading Readiness Test, used with the students who could not read or could read at the primer level, showed significant improvement by the treatment group in word recognition. The other components of the readiness test which assessed letter recognition, sound identification and recognition of sight words did not reliably indicate improved performance by the treatment group.

It is recommended that Hmong literacy skills be included in the school instructional program at all grade levels. The success of the after school Hmong literacy program can not be measured solely by test performance but is better gauged by the willingness of the students to participate, the desire of the parents to maintain culture through literacy, and the noticeable improvement of self-esteem which becoming literate in one's home language inculcates.

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TEACHING HMONG LITERACY SKILLS TO HMONG ELEMENTARY STUDENTS: ITS EFFECT ON ENGLISH READING COMPETENCIES

A Thesis

Presented

to the Faculty of

California State University, Chico

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

in

Education

---

by

Candace Kelly

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CHAPTER I

INTRODUCTION

Bilingual education programs are a necessity in the United States considering there are over three million students who bring English as their second language to our schools (Mace-Matluck, 1983). Students receiving instruction in their home language include Tagalog, Ilocano, Navajo, Spanish, Chinese, Portuguese and Korean just to name a few (California State Department of Education, 1983). However, by 1982 there was a new population of refugees -- the Hmong -- numbering 85,000 in the U.S. (Bliatout, 1988). The presence of this group, often concentrated heavily in specific districts (Bliatout, 1988), places critical demands on schools. The impact of this group has been felt in areas such as Fresno, California where in July, 1979, the Hmong increased fifty fold within six months to 2,000. Three years later there were 12,000 and by 1988 there were 23,000 Hmong living in Fresno (Yang, 1990)! Other states have witnessed similar dramatic influxes of Asians including Wisconsin, Minnesota and Michigan.

The Hmong are in America, not as immigrants but as refugees from the Viet Nam War. They didn't come by choice, they came in order to escape persecution when the Pathet Lao

enforced a bloody repression against them, accusing them of being mercenaries of the C.I.A. (Yang, 1990). During the war, the Hmong organized special guerrilla units, directed air strikes, and rescued downed American pilots (Bliatout, 1988). In 1972, from a population in Laos of 300,000, (Bliatout, 1988), it was estimated that 50% were killed (Walker, 1986). Seventy percent of these Hmong recruits were only 10 to 16 years old (Walker, 1986). The United States has felt a sense of responsibility toward the Hmong involvement in the Vietnam War and in 1970, the U.S. granted them asylum as displaced people (Bliatout, 1988).

In California, of the 21,915 Hmong students enrolled, 18,091 are Limited English Proficient (State Department of Education, 1990). Northern California has been especially affected. Here, in a small, basically white, low income area in Butte County, the Thermalito School District grew from 25 to 200 Asian refugee students between the years 1988 and 1992. This represented 33% of the total student body and created the need for specialized instruction to educate them.

Schooling the Hmong brought new teaching challenges because many were not native speakers of English. This, compounded with limited, if any schooling in their home country, presented great difficulty relative to English instruction. In order to build on their existing language

skills in Hmong, and to buffer their anxiety faced with an all English curriculum, an after school program was created specifically to promote reading in Hmong in the Thermalito School District. The program was offered through a grant by Migrant Child Education and was funded for three years. Its experimental nature required that the after school setting would not infringe on school academics. This program offered the Hmong students an opportunity to build their academic skills in a language which they knew well. It served to promote the value of their native tongue and thus their culture and to address the importance of accepting both roles, as Americans and as Hmong. However, offering a class in the Hmong language would require parent support to ensure student enrollment. Therefore, inservices were arranged to familiarize the parents with the intent and theory of bilingual education. At these meetings, the parents were informed of the necessity to build a strong foundation in the primary language. They were told that students who read, write, and have well developed cognitive language skills are those who advance quickest in a second language environment. These sessions created the parent support to sustain the after school Hmong program in the district.

A problem developed relative to offering Hmong instruction without any credentialed, Hmong speaking

teachers. This was alleviated by teaming a classroom teacher with a native speaking paraprofessional. The Hmong paraprofessional was guided by the teacher who made the instructional plans and the paraprofessional completed them under her/his supervision. In this manner, the Hmong literacy classes were organized.

Statement of the Problem

This study compared the effects on English reading skills of Hmong students who participated in Hmong literacy classes with Hmong students who did not participate in the literacy classes. The comparison groups were Kindergarten through grade four. The effects were measured by a pre and post English reading readiness test for those students who were not readers. For those students who were able to read, annual CTBS reading comprehension scores were used. The Hmong literacy class participants were those who attended the after school program for at least 32 of the 40 class hours. These participants were enrolled for one or two 40-hour sessions each year, beginning September, 1989 and ending June, 1991. A control group was established for comparison consisting of those district Hmong students, grades kindergarten through four, who did not participate in the Hmong literacy classes.

Statement of Need

The Hmong language is identified as a pre-literate language. That is, its written form was only introduced in the 50's (McGinn, 1989). The written language is so new that there has not been the time to investigate its usage in the schools. In fact, the Hmong language has never been formally used in education (McGinn, 1989). Therefore, there is very little research available concerning the impact of American education on this language group and none concerning the development of Hmong literacy in the schools.

The completed studies focus on Hmong literacy and oral language usage by Robson, Green and Reder (1973). These three studies investigated adult literacy in Minnesota, Oregon and the refugee camps. Another study by McGinn (1989) examined Hmong literacy in Fresno High Schools. This study then, expanded on existing literature by including an examination of Hmong literacy at the elementary grade levels.

A further need for this study is apparent when one considers that the preponderance of research in bilingual education involves structurally similar languages such as Spanish and English or French and English. However, the Hmong speak a non-European language and their culture is traditionally nonliterate. To generalize Romance language group findings to the Hmong is questionable. Niyekawa

(1983) stated, "Such generalizations tend to ignore a number of important factors that affect the degree of difficulty in learning to be literate in two completely unrelated languages" (p. 97). This study then contributed to the literature concerning the Asian languages.

Purpose of the Study

As the Hmong student population continues to grow in California, their intensive impact upon certain school districts demand specialized instruction. With this in mind, a program which can assist the Hmong students in their transition to the English language curriculum while retaining esteem for their own language and culture is extremely desirable. Also, because reading is the cornerstone to success in school, a program which can achieve accelerated reading in English is critical and essential for many school districts in California.

Hypotheses

The two hypotheses which are the focus of this study are summarized below:

a) Second through fourth grade Hmong students who receive 80 hours of instruction in primary language reading will score significantly higher in English reading comprehension as measured by the annual CTBS than will

second through fourth grade Hmong students who do not receive primary language instruction.

b) Kindergarten, first grade, and beginning readers who are Hmong students and receive 80 hours of pre-reading instruction in their primary language will score significantly higher on a readiness test than will Hmong students who do not receive primary language pre-reading instruction.

Research Question

Is there a critical period in English reading development for transfer of reading skills between English and Hmong?

Limitations of the Study

1) The treatment group has a choice to participate in Hmong instruction which raises the question of the nature of volunteers being more academically motivated.

2) Ideally, full fluency in Hmong literacy would require an indefinite number of years of practice and use. This study is limited to 80 hours of such application over a two year period.

3) A criterion based test was developed by the researcher for pre-reading assessment due to the cost and time required for administration of a standardized readiness test which is more desirable for research purposes.

4) No test of Hmong language or reading skills is available therefore control of these factors is not possible.

5) There is no control of the quality of Hmong instruction. The classes were taught differently throughout the three year period due to the variation of teachers and paraprofessionals who were willing to instruct the classes.

Definition of Terms

Bilingual Student

"One who can use two languages alternately" (Ovando & Collier, 1985, p.66).

Biliterate Student

An advanced state of bilingualism where the student cannot only speak two languages fluently but also reads and writes these two languages (Niyekawa, 1983).

Bilingual Education

"The use of two languages for the purposes of academic instruction consisting of an organized curriculum which includes at a minimum: (1) primary language (L_1) development; (2) English (L_2) acquisition; and (3) subject matter instruction through L_1 and L_2. Bilingual education programs assist limited-English-proficient (LEP) students in acquiring literacy both in English and L_1 to a level where

they can succeed in an English-only classroom" (California Department of Education, 1985, p. 35).

English as a Second Language (ESL)

"A structured language-acquisition program designed to teach English to students whose native language is not English" (Ovando & Collier, 1985, p. 2).

Fluent-English-Proficient (FEP) Student

"A student whose primary language is other than English and whose English proficiency is comparable to that of the majority of students of the same age or grade whose primary language is English. The FEP category does not include English-only pupils. Included in the FEP category are students previously classified as limited-English speaking or non-English speaking" (California Education Code Section 52164).

Limited English Proficient (LEP) Student

"A student whose primary language is other than English. These pupils do not demonstrate clearly developed English language skills of comprehension, speaking, reading, and writing necessary to receive instruction only in English at a level substantially equivalent to students of the same age or grade whose primary language is English" (California Education Code Section 52164).

Migrant Child Education Student

"Designation as a currently migratory child or formerly migratory child are defined in Section 201.3 of the Migrant Education Program Regulations. According to those definitions, designation as a currently migratory child or formerly migratory child is based on whether or not a move was made within the past 12 months "to enable" the child or a member of the child's immediate family "to obtain temporary or seasonal employment in an agricultural or fishing activity" (State Education Agencies, 1991, p. 41).

Primary Language (L_1)

"The language identified in the Home Language Survey as the language the student first learned, the language used by the student most frequently at home, the language spoken most frequently by the parents with the student, or the language most often spoken by the adults at home" (California Department of Education, 1984, p. 37).

Transfer (L_1-L_2)

Transfer occurs when learning in one language influences the potential for performance in another language. For languages that have the same alphabet or other similar common features, transfer of reading skills from one language to the other is a widely accepted principle (Thonis, 1981).

CHAPTER II

LITERATURE REVIEW

The Written Language of the Hmong

The Hmong language has survived for at least 4,000 years (Vang, 1984) and several written forms have been utilized at different times and by various Hmong populations. In China, before the Hmong migration in 1750 to Southeast Asia, their language was written with Chinese characters. Another script, known as the Pollard script, was introduced by a missionary in China around 1905 (Bliatout, 1988).

There is a noteworthy history behind a third writing system known as the Pahawh Hmong. This alphabet was invented in Laos in 1959 by an illiterate Hmong named Shong Lue Yang. (He also invented a script for the Khmu' language.) The history of Shong Yang is marked with mysticism as he is described as a messiah, inspired to unite and preserve the Khmu' and Hmong people in their struggles during the Viet Nam War. He was imprisoned at a C.I.A. detention Center in 1967 for four years and later assassinated by the Communists (Vang et al., 1990). Shong Yang's unique orthography is used principally by his

religious followers and is the only complete indigenous writing system for Hmong (Bliatout, 1988).

The most popular written version known today was invented in the early 1950's by two American Protestant missionary linguists, J. Linwood Barney and William Smalley. Their system, based on the Romanized Practical Alphabet, was standardized in consultation with the French Catholic missionaries in Laos and Thailand (Bliatout, 1988). In the United States, a growing number of publications have become available in this script, including primers, magazines, novels and recorded folktales.

Because Hmong is a newly literate language, there are only a few studies documenting its use in California. These investigations concern adults and adolescents. One such study was done by Reder (1985) who surveyed 2,496 Hmong adults in a small, west coast, community. He found that even though 27% of the population had some education, only 2% were literate in Hmong or Lao.

A second study was done by McGinn in 1989. McGinn surveyed 445 randomly selected, Fresno high school students. He found that one-half had at least a minimum proficiency in reading Hmong. Their literacy, he reported, was attributed to informal primer instruction with assistance from friends, the church, or a teacher in the refugee camp. He noted that literacy in the home showed no significance when correlated

with the students' proficiency. There was also no significant difference by sex. What McGinn found to be significant was the students who had been here for seven years or less were more likely to read and write Hmong than were those students of longer residency (x^2=23.68). He also reported that those who were older tended to be literate in Hmong (x^2=27.22). Specifically, there were 134 literate students in grades ten through twelve, and there were 83 in grades seven through nine. Furthermore, he showed that those high school students who had arrived in the U.S. between the ages of ten and eighteen were significantly more likely to be literate than those who arrived between the ages of one and nine (x^2=47.48).

McGinn (1989) went further to describe the Hmong's rationale for maintaining the written language by interviewing community leaders consisting of nine adult males and two adult females. He found that there exists a definitive urgency to continue the use of the Hmong language. The participants felt that the survival of the culture depended on literacy. It was believed that if the language dies, so does the culture. In the survey, it was reported that collecting and researching the history of individuals, families and clans is done in the Hmong script. Thus, literacy in Hmong was deemed essential to preserve the past and ensure the future for the Hmong people.

The Oral Language of the Hmong

Hmong is related to the languages of Southeast Asia and Southern China and linguistically is referred to as one of the Miao-Yao languages (Bliatout, 1988). McGinn (1989) supported this in his research, stating that Hmong shares similarities with Chinese in tone and structure. Citing Radcliff, 1986, McGinn further reported Hmong has been linked in lexicon to the Sino-Tibetan languages. He also cites Benedict, 1975, in his claim that Hmong was linked with the Chinese and Austronesian languages, calling it Austro-Tai. Without a written history, and as a marginal political society (Young, 1990), the history of the Hmong language remains shrouded.

Because the term Miao names the language of the Hmong, I would like to point out the word's origin. The Chinese refer to the Hmong people as the Miao. Other groups in Indo-China call them Meo (Yang, 1978). However, both terms are derogatory (Walker, 1986) when linked with the accounts given in the Chinese History Classic. This document dates back to the second millennium before Christ and depicts the Miao tribal people as cruel, unsavory barbarians (Young, 1990). Therefore, the term Hmong (written Hmoob in Southeast Asia and Hmong in China) is preferred, signifying "free" in the Hmong language.

Hmong is a monosyllabic language and includes the use of eight different lexical tones. In the Romanized version, the tones are represented by a consonant which appears at the end of the word. Tone is one of three distinct parts of the Hmong syllable. There is an optional consonant or consonant cluster, a requisite vowel and a tone marker (-b, -j, -_-g, -s, and -m). No consonant sound ends Hmong words except for "ng", or nasalized vowels. (Bliatout, 1988).

The Hmong language has six simple vowels, a, e, i, o, u, and w. Only w is entirely different from English. As for the consonants, much variance between English and Hmong is encountered. A single consonant sound in Hmong may be represented by a sequence of one to four letters, each letter indicating one feature of the sound. Combinations might include "tsh", whereby the t shows that the sound begins with a stop; the s indicates a fricative release; and the h denotes that the release is aspirated. Hmong has many more consonant sounds than does English, and English has a few consonant sounds which Hmong does not (Bliatout, 1988).

It should be mentioned that there are two Hmong dialects, White Hmong and Green Hmong, named for the color of the regional dress. (Green Hmong is also referred to as Blue Hmong because the word green, 'ntsuab', denotes both the shades of blue and green.) Bliatout (1988) stated that

differences between pronunciations seem to be no greater than those between British and American English. Yet further variations exist in spelling, semantics, and grammar. Of the two dialects, Bliatout believed White Hmong is favored because more dictionaries have been generated in that dialect than in the other. He also expected that in Laos the preponderance of those who were educated were speakers of White Hmong. These dialects confirm that the Hmong people were separated for an extensive period of time in China resulting in regional differences which still exist today (Bliatout, 1988).

Literacy in the Second Language

There are two types of skills in second language acquisition, one is oral and the other written. Literacy is dependent on oral language proficiency, however such proficiency does not guarantee literacy. "If this were true, we would not have estimates from 10 to 15 percent of the general school population struggling with reading retardation" (Morris, 1972, p. 160). Speaking a language does not insure reading success, but the ability to use its vocabulary, syntax, and grammar at a level of a six and a half year old is desirable for beginning instruction (Thonis, 1981). Thus, well developed oral proficiency provides the foundation for literacy.

Recognizing that speech precedes literacy, there still are other salient aspects which differentiate them. First of all, literacy and speech employ different psycholinguistic strategies to cope with the variant characteristics of the two forms. Goodman (1971) described these differences as the situational contexts, the gestures, and other paralinguistic cues associated with speech. When speaking, one can augment and constrain meaning based on immediate visual and linguistic feedback. However with print, due to its decontextualized character, such negotiation does not exist.

A second and culminant difference between speech and print was generated by Cummins (1981). He attributed the difference between learning to speak and learning to read with context reduced and context embedded experiences. Interpersonal communication (context embedded) may take two years to develop, whereas formal speech and literacy (context reduced) requires five to seven years to master. Thonis stated that the skill associated with interpersonal communication is embedded within the situation itself, however, "such skill is insufficient for problem solving, for reasoning or for other cognitive processes required for academic achievement in subject matter" (1981, p. 149). She contended that reading, when contrasted with everyday

speech, is a different type of cognition and may even be independent of specific language skills.

Cummins coined the term CALP, "cognitive academic language proficiency", to describe the higher order, processing skills of which reading is a part. Cummins (1979) explained CALP promotes the decontextualization and elaboration of thought. According to Thonis (1981), CALP is defined as the potential for reading comprehension. CALP is associated with fluency in reading and other cognitive functions of language. Kessler (1982) defined this competency as the ability "to use language effectively as an instrument of thought and to represent the thinking processes by means of language" (p. 63).

In contrast to fluency in reading is the skill of decoding. Decoding relies on the utilization of the graphophonemic system including perceptual, visual, and auditory skills (Morris, 1972). According to Morris (1972), "We don't want readers to pronounce each word, we want them to comprehend with minimal oral-aural cues, as in efficient reading" (p. 161).

Perceiving the development of reading as a two tier process, beginning with decoding and advancing to a CALP generated fluency, the research shows that difficulty in reading is more acute after the initial decoding stage. According to Morris, citing Tireman's 1936 study, it was

found that Spanish speaking students "became more academically retarded the higher they advanced through the grades" (1972 p. 157). At grade four, there was a seven month retardation and by grade seven, the lag equaled 2. 3 years. Morris found this same trend with Indian children (termed progressive retardation) in a 1958 study by Coomb. Lastly, citing the Coleman Report of 1966, Morris related that all minorities (excluding Orientals) do progressively worse than the dominant group, and the discrepancy in achievement was greatest at grade twelve.

Morris (1972) attributed the failure of second language readers in achieving fluency to their limitations in concept knowledge. She succinctly stated the cause:

> The major weakness in the reading of ESL students at the secondary level is the fact that, in all too many instances, the initial reading step is performed: the child decodes the symbols and produces the word -- and stops. The word fails to trigger anything because the concepts it represents to us and to the author simply do not exist for the child, or they exist in a limited, vague form. (p. 162)

Morris posed that it is the lack of background experiences which hampers reading fluency for second language students. Smith similarly supported this contention by noting that decoding becomes automatic, but heuristic functions require "specific experience and perceptual background to feed into the reading process" (1973, p. 25). Finally, Cummins (1979) acknowledged the

same view, postulating that poor reading comprehension skills in the upper grades inhibit assimilation of most types of subject matter. He stated that in the early grades only a relatively low level of listening comprehension and expressive skills are involved. Then, as the grade level progresses, "the curriculum content becomes more symbolic and requires more abstract formal operational thought processes -- the children's L2 competence must be translated into deeper levels of "cognitive competence" in the language" (p. 231). According to the experts, it is clear that the emphasis in reading comprehension and abstract thought in the upper grades is causing deficit achievement for second language students. The term CALP then is a acronym which names those language and thinking skills especially necessary for reading fluency.

Oller (1982) however, contended that CALP was introduced without any experimental evidence. He suggested that other theories offer different analytical schemes in defining language fluency. Perhaps they all, including Cummins' theory, are different ways of looking at the same thing. He recalled that in the 70's, listening, reading, writing, and speaking were believed to share a deep commonalty based on tests showing strong correlations among the components. Oller contended that there perhaps exists a solitary factor in language instead of the proposed

progression of discrete skills which results in proficiency. "It may be much more difficult than theorists have often claimed to distinguish language abilities from knowledge and intelligence, in so far any of these constructs can be defined at all" (p. 110).

Oller (1982) supported, as did Samuda (1975), the existence of a general ("g") factor in intelligence. Ascribed to this "g" factor are the abilities to think abstractly, conceptualize and problem solve, very similar to Cummins' definition of CALP. What Oller believed, based on correlations between language ability and intelligence, is that both are so closely intertwined that they can hardly be separated. "Hence is it not also true that language ability is at the hub of whatever the wheel of intelligence may be?" (p. 6). This acknowledgment was also made by Flahive (1980) who stated that many of the same factors associated with reading comprehension are also known to be associated with intelligence.

The Transfer of Reading Skills Across Languages

Comprehension and fluency in reading develop via the function of Cummins' CALP or Oller's "g" factor. These capacities are generic in the sense that they do not exist particularly or favorably to any one language. As Smith reported (1973), "It would seem that the reading process

will be much the same for all languages with minor variations to accommodate the specific characteristics of the orthography used and the grammatical structure of the language" (p.140). Niyekawa (1983) echoed this premise, however she qualified it by stating that no language has any advantage over another in producing skilled readers. That is, "the skilled L_1 readers of one system are able to read as efficiently as skilled L_1 readers of another" (p. 102). Along the same lines, Ferguson (1977) proposed that languages are all equal in their capacity for communication. None are primitive in the sense of evolution of human language.

Therefore, given that the same qualifications exist for literacy regardless of the language, it would appear that becoming literate in one provides the foundation for literacy in another. This indeed is expressed by the current research. According to Thonis (1981), the skills associated with literacy, when learned, do not have to be relearned when a second or even third language is acquired. She delineated the transfer of 48 skills across language boundaries including both general and specific terms for prereading, decoding, and comprehension. Enumerated were: eye-hand coordination, figure-ground awareness, punctuation, sound-symbol associations, thinking skills, attention, being literate, etc. Her definition follows:

> Transfer takes place when there are elements in the new task similar to those in the task or skill previously acquired. For languages that share the same alphabet and have common features in the visual symbols, there are immediate transfer possibilities. For Asian languages with logographic writing systems, for other non-alphabet systems, or for different alphabet writing like the Armenian alphabet, transfer is not based on the similarity of elements but on the more general understanding that the visual symbols represent the auditory ones. This transfer is based on the application of principles and generalizations. (p. 151)

Further support is given to the theory of transfer of reading skills, (Goodman, 1973; Thonis, 1981; Selinker, 1971; Ferguson, 1977; Legarreta-Marcaida, 1981; Kessler, 1982; Niyekawa, 1983; and Cummins 1981) however, Mountford (1970) put it simply by stating that one learns to speak and does not learn articulacy over again for the second language. Similarly, when one learns to read, literacy is not relearned. "Literacy is acquired once-for-all, like linguacy itself. (Downing, 1973, p. 71).

There is a preponderance of research in bilingual education which has provided unequivocal evidence for transfer. Many of these studies were experiments in immersion education. Immersion education began in the mid 1960's in the province of Quebec, Canada and today has become relatively widespread and commonplace there. The immersion program is a type of bilingual education in which a second language is used along with the students' first language for curriculum instruction during some part of the students' elementary and/or secondary schooling. All

students in the immersion class are at the same level in the language of instruction (their second language) and the language of instruction is the minority language within the community. Cummins (1979) contrasted the immersion programs of Canada with the submersion programs of the United States as follows:

> In immersion programs all students start the program with little or no competence (sic) in the school language and are praised for any use they make of that language. Children in submersion programs, on the other hand, are mixed together with students whose L_1 is that of the school and their lack of proficiency in the school language is often treated as a sign of limited intellectual and academic ability. Children in submersion programs may often become frustrated because of difficulties in communicating with the teacher. These difficulties can arise both because the teacher in unlikely to understand the child's L_1 and also because of different culturally-determined expectations of appropriate behavior. In contrast, the immersion teacher is familiar with the child's language and cultural background and can therefore respond appropriately to his needs. The immersion child's L_1 is never denigrated by the teacher and its importance is recognized by the fact that it is introduced as a school subject after several grades. (p. 225)

In summary, submersion involves instruction in the majority language in a mixed class of native and non-native speakers. The immersion classroom, on the other hand, consists of only native speakers of English being taught in the minority tongue (Spanish or French).

There is one further factor important in distinguishing bilingual education programs. That is, in immersion programs, the goal is to <u>add</u> a second language,

knowing that the mother tongue, English, will not be lost. In contrast, for submersion programs, the focus is to learn English while students may or may not retain their native tongue. According to Lambert and Tucker (1972) when speaking of the French immersion programs in Canada:

> The development of strong skills in a second socially relevant language expands the repertory of skills of these children. These skills do not detract from the children's English home-language base, but rather enable them to maintain at least normal progress. For these children and their parents, it becomes clear that the learning of the second language in no way portends the slow replacement of the first or home language, as would be the case for most linguistic minority groups in North America that are pressured to develop high-level skills in English at the expense of their home language. (p. 19)

Thus, submersion is termed subtractive and immersion is termed an additive form of bilingual education. They differ critically in outcome with regard to the students' development of the home language. They are alike only in that both involve a home to school language switch.

In a review of the literature the theory for the transfer of academic skills is not documented in submersion type programs. This is the case according to Ovando and Collier (1985) who noted the tendency for student failure as follows:

> Submersion provides no native-language support or structured ESL instruction and may unconsciously place minority students in a position subordinate to monolingual English speaking students and teachers; it may lead to low achievement and high dropout rates,

> especially among minorities who sometimes perceive their status as low relative to the majority, such as Native Americans, Mexican-Americans, Puerto Ricans, and Blacks in the United States. (p. 43)

An example of a submersion program which witnessed academic failure for minority Finnish students was carried out in Sweden by Skutnab-Kangas and is reviewed by Paulston (1972). In this instance, the Finnish are the working class minority. They are characterized by social conflicts, stereotyping and lack of self-esteem, portrayed by their shame in speaking Finnish as immigrants in Sweden. The five year study examined 687 Finnish immigrants who were attending Swedish schools. It was found that the average Finnish group scored 10% lower than that of the average Swede. Another study of this group, using the Illinois Test of Psycholinguistic abilities administered in Finnish, showed that the Finnish migrants were three to four years behind the Finnish students in Finland.

Paulston (1972), citing Skutnab-Kangas, stated that the students who were ten years of age or older, at time of immigration, attained higher levels in Finnish and did overwhelmingly better in Swedish. Those who were six or under or were born in Sweden did not do as well. However, those who moved as school began (ages seven through eight), were the worst off of all. Skutnab-Kangas, as reported by Paulston, correlated the progress made by the older students to their strong foundation in concepts, abstract thinking

and the development of the mother tongue. Therefore, this study showed submersion to be a deficit inducing form of education, yet, it supports the original premise, that the establishment of transfer from a minority language to a majority language is based on the development of CALP (or the "g" factor) as indicated by the success achieved by the older students. They had developed literacy and the ability to think abstractly in their mother tongue, while the younger students, without such capacity, lacked the foundation on which to begin in a new language and thus floundered (Niyekawa, 1983).

On the other hand, for the majority language students who do not face loss of their first language, immersion programs support the transfer of skills. Successful research of this type is best illustrated by the St. Lambert Experiment (Lambert & Tucker, 1972). This was a longitudinal study which included Anglophone students immersed in a Francophone classroom. Control and experimental groups were chosen from middle class neighborhoods in Canada. Within one school in St. Lambert there were 22 first graders who made up the English control group and another 26 other first graders who made up the experimental group. A second control group, from a nearby neighborhood in Montreal, was established which consisted of 26 second graders. All three groups spoke English as their

primary language. Starting in Kindergarten, the controls were instructed in English all day except for one period of French. The experimentals were instructed all day only in French. Also, a French control group was chosen in a nearby French private school. This group, consisting of 22 second graders, spoke French as their primary language and received their instruction in French.

The researchers employed various preliminary investigations to ensure that all four groups were equal. First, using the Raven Progressive Matrices, a non-verbal intelligence test, it was shown that they all displayed a similarly wide range distribution in scale. From this it was established that there were no significant differences in intellectual functioning.

Secondly, home background factors were investigated. A one hour survey was carried out which assessed the socioeconomic status of the family, the style of living quarters, the reading materials available, the aspirations in education and the style of speech. From this survey, two themes emerged as statistically significant. It was found that the English controls emphasized education and realized a higher quality in the linguistic environment. The French control tested statistically lower. The researchers included analysis of covariance to adjust for the differences found here.

Thirdly, the attitudes of the groups were analyzed concerning their perceptions of the two cultures and languages. The researchers concluded that all groups were equivalent in desiring their children to develop skills in the other language and to make friends from the other group. They found that each group wanted to maintain independence and preferred not to identify and think like the other group. In this respect, the comparison groups' perceptions were aligned and no antagonism was noted.

The students' academic progress was tested annually. Tests included both English and French achievement tests, as well as tests in Language Arts, listening, speaking, foreign sound discrimination, problem solving, cognitive flexibility and students' cultural attitudes.

The major finding from the study "which is surely evidence for positive transfer of skills across languages" (Tucker, 1977, p. 12) is that the reading achievement in French did predict reading achievement in English (a positive and marginal significant correlation). Tucker stated that after three years in the French immersion program, the class performed as well as the English controls, scoring in a mean percentile of 80 in reading. However, in first grade they scored significantly lower in reading. The results after the first year were summarized by Lambert and Tucker (1972) as follows:

1. The experimental group fell clearly below in English reading, word knowledge and discrimination. However, the two mean scores were at the 50% level and reading was at 15% which confirms the element of transfer.

2. In speaking and comprehension in English, the experimental groups were as competent at the controls. They did have a slower rate of production and made greater grammatical errors in English.

3. In speaking French, the experimental group was making good progress but was definitely poorer than the French controls in making stories.

4. The experimental group was as efficient as the controls in French word discrimination, sentence comprehension and word order.

5. The oral performance of the experimental class substantially exceeded the English controls who received French language instruction.

Follow-up classes were added to investigate if the same results would occur. There were two first grade English speaking controls (N= 26 and 28), and one first grade French control (N=25). The experimental group consisted of two first grade classes, (N=25 and 13) with each class containing 30 students. The same procedures were followed as previously. The results as described by Tucker (1972) were consistent. The experimental group was as

competent and sometimes more competent in English comprehension and production when compared to the controls.

In combining results of both studies, the authors reported that the experimental groups' reading and word discrimination in French were at the same level as the French controls, however they were significantly poorer in listening comprehension and mastery of French phonemes. Retelling stories was comparatively equal in its depth and diversity but rhythm and intonation marked the experimentals as non-native speakers.

In grade two, 75 minutes of English instruction (40% of the school day) was added to the immersion class. The subjects of music, art, and P.E. were instructed in English. After grade two, the pilot and follow-up experimental groups, when compared with the English controls, did equally well in English reading for word knowledge, word discrimination, listening and reading comprehension. Only spelling, which was at the 70 national percentile level, fell reliably lower when compared with the English control groups' level. Also, the French instructed experimental groups did reliably better on the English Peabody Picture Vocabulary test. Many of the English tested concepts of this test had been introduced only in the French class. Therefore, the proof of transfer is evident as the experimental group surpassed the comparisons in English

vocabulary and matched them in reading without direct instruction in that language.

The Interaction Model of Bilingual Education

The immersion program of Canada illustrated the transfer of skills across languages. The students were instructed in a second language yet maintained normal development in their primary language despite its limited use in school. For minority students as shown in the Finnish study, however, this was not the case. In order to account for the divergent outcomes when examining the effects of second language instruction, Cummins (1979) has proposed an Interaction Model. The model theorizes primary language instruction for minority students and second language instruction for the majority students. "The core of the model is its explicit assumption that the outcomes of bilingual education can be understood only in the context of the interaction between Educational Treatments and Child Input and Process Variables" (p. 246). Cummins referred to the interaction between the school program and the student's background, mediated by the socio-cultural factors of the community. Taken together, these factors predicate the effects of second language instruction.

Within the model is "child input" which includes the conceptual-linguistic knowledge of the student. This

encompasses both the level of competence as a bilingual, and the attainment of CALP in the home language. Both these aspects depend on how well the primary language is supported in the home, as Cummins described below (1979):

> When the usage of certain functions of language and the development of L_1 vocabulary and concepts are strongly promoted by the child's linguistic environment outside of school, as in the case of most middle-class children in immersion programs, then intensive exposure to L_2 is likely to result in high levels of L_2 competence at no cost to L_1 competence. The initially high level of L_1 development makes possible the development of similar levels of competence in L_2. However, for children whose L_1 skills are less well developed in certain respects, intensive exposure to L_2 in the initial grades is likely to impede the continued development of L_1. This will, in turn, exert a limiting effect on the development of L_2. In short, the hypothesis proposes that there is an interaction between the language of instruction and the type of competence the child has developed in his L_1 prior to school. (p. 233)

From this standpoint, Cummins (1979) stated that minority language students are benefited by instruction in their L_1 "as a prerequisite for attaining a higher threshold level of bilingual competence" (p. 232). Such competence is lacking according to Angel (1972) who explained that children of minority status often are weak in certain cognitive skills which affect academic development. Areas lacking included 1) stimulation from the home environment, 2) full and well articulated verbalization and 3) a rich variety of experiences leading to sensory sharpening. This is not due to the culture per se but to the low economic

status. Studies have shown a difference of 20 points on the Standford-Binet where 79 as opposed to 105 is the mean IQ depending on the economic status of the student (Samuda, 1975). Samuda stated that no matter what the race, the higher the socioeconomic status (SES), the higher the IQ is likely to be. Hence, low SES, minority students require additional instruction in their primary language before second language instruction begins. This was not true for the middle-class students as found in the Canadian study.

The second variable of Cummins' Model involves the interrelated aspects of the socio-cultural factors and the students' motivation to learn a second language. Cummins (1979) contended the goal in immersion programs is the harmonious identification with both cultures. "... For a child whose attitudes towards L_2 speakers is more ambivalent, gradual introduction of L_2 as a medium of instruction would seem more appropriate" (p. 244). In support of this contention, Paulston (1972) suggested that studies in self-esteem show bilingually instructed minority students view themselves positively and in many cases more positively than mono-lingually instructed pupils. Fishman (1976) found in a global survey of bilingual education programs, that student satisfaction was higher when the language of instruction represented ethnicity more than when it represented technology. The achievement of success, he

stated, was dependent upon the acceptance of the minority language by the staff and by the community. It stands to reason, therefore, that a program which provides minority language instruction, positively affects the self-perception of the minority culture. With studies cited above by both Fishman and Paulston, it is easier to understand the following dictum stated by Tucker (1977):

> Thus, in situations where the home language is denigrated by the community at large, where many teachers are not members of the same ethnic group as the pupils and are insensitive to their values and traditions, where there does not exist a pressure within the home to encourage literacy and language maintenance, and where universal primary education is not a reality it would seem desirable to introduce children to schooling in their vernacular language...(p. 39-40)

Therefore, to complete the Interaction Model, success in bilingual programs requires the promotion of the minority language. This in turn, provides the atmosphere necessary for the student to acquire the requisite skills for academic functioning. With this foundation of skills established in the primary language, then, the minority student is equipped for successful schooling in a second language.

CHAPTER III

METHODOLOGY

This study was designed to measure pre and post English reading skills in order to gauge the effects of primary language instruction for K through fourth grade Hmong students. The question of focus was, will the after school instruction carry-over or transfer requisite processes for reading in English?

This chapter discusses the selection and description of the population, the instruments used to measure English reading skills, and the procedures which were followed throughout the instructional program including test administration.

Subjects

The subjects for this study were kindergarten through fourth grade Hmong students enrolled in the Thermalito School District. At the inception of this study, in 1989, the total population of the district was approximately 1,500 of which 35% were second language students. The 230 Hmong students equaled 75% of this total minority population. The general composition of the student body was from low income households with the Hmong population being chiefly welfare dependent.

The experimental group consisted of those K through fourth grade students who participated in the after school primary language program for either one or two years during the 1989 - 90 and/or 1990 - 91 school year. To be eligible for the program, the student had to be qualified for Migrant Education services (see definition of terms) and had to have parental permission to attend the program. The program included 40 hours of after school instruction each year whereby 30 hours of instruction was considered the cut-off for inclusion within the study. Thirty hours was chosen as the cut-off to ensure that the experimental group was consistent in the amount of instruction.

The control group included K through fourth grade, Hmong students who did not participate in the after school, primary language program. These students did not participate either because they were not qualified as migrant, or they were qualified but chose did not attend by their own or by parental choice.

A Quasi-Experimental Design was utilized because randomization of group assignments was not possible as they were determined by volunteer and migrant status. The self-selection nature of this study caused changes in composition of groups. Students who attended the first year and not the second were included only in the first year data as part of the experimental group. Students who participated for

one year could not be included within the control group for the following year.

Instrumentation

As with any new program, there is a need to assess the effectiveness of the teaching approach based on the progress made by its participants. Two types of assessment were used. One was the standardized California Test of Basic Skills (CTBS) Reading Comprehension test and the other was a criterion test of reading readiness. The researcher and a kindergarten teacher designed the Reading Readiness Test since research prior to test development found no suitable measures available. The nearest possibilities included the Maculaitis Assessment Program, which was rejected because it included extensive basic concepts not contained within the instructional program. The California Assessment Test (CAT) was likewise rejected as its use of phonetics and isolated speech sounds were thought to be inappropriate for those children learning a second language. Also, measures requiring individual administration were rejected due to time and resource constraints.

The Reading Readiness Test

The Reading Readiness Test was developed for the program. A combination of teacher expertise and trial and

error was used to arrive at a final product. The final form included four sections, elaborated below:

1) Word recognition. This is a 20-item test to determine if the student recognizes written words. A picture of an everyday item is presented (a pencil, a house, or a dog, etc.), followed by three choice-words, none of which have identical beginning sounds.

2) Letter recognition. This test is based on the Brigance Inventory of Skills. Necessary changes were made to allow for group administration. It consists of 20 items, ten each for upper case and lower case letters. The student circles a choice from four possibilities in response to the letter pronounced by the teacher. All but the six least commonly used letters (X, Z, W, Y, V, Q) are tested. Pre and post alternate forms were used.

3) Sight words. This section was modeled on the Silvaroli Individual Reading Inventory. Two sets of ten items were created. The first set contained words considered readable at the primer level. The second set contained words considered readable at the first grade level. The teacher says a word which the student attempts to identify by circling it from a group of four. All four words of each item were selected from the reading list based on their similarities. Therefore, as much as possible, each item contained words with similar beginning sounds. Two

forms were utilized which differed only in the word which represented the correct response.

4) Sound discrimination. For this section, the teacher voices the given letter sounds, such as "ba" or "m", repeating them twice for clarity. The students then attempt to write the letter which represents the given sound. There are 10 sounds tested similar to the first ten given in the Brigance Test of Basic Skills. Again two forms were used, differing in the speech sound tested.

The CTBS Reading Comprehension Test

A second measure used in this study was taken from the California Test of Basic Skills which is administered by the district annually in May for first grade and above. The researcher collected the normal curve equivalent (NCE) score for the reading comprehension section. After a review of the battery, this specific measure was selected due to its consistency across the grades. The other components not selected were language and spelling. Neither of these sections were used because the emphasis was on vocabulary and included words out of context. The section selected, reading comprehension, tested the ability of a student to read a selection and answer questions concerning content comprehension. Not only was the format consistent across

the grades, but also the tested skill paralleled the objectives of the instructional program.

Procedure

The Hmong Biliteracy Program was provided in the Thermalito School District funded through a grant by Migrant Child Education, Region II. The program began in the fall of 1989 offering the migrant Hmong students the opportunity to learn to read and write in their own language. This study included the first two years of the program and follows the progress made by the students in grades K through four.

The instructional program was offered after school, for one hour, four days per week. The program included 40 instructional hours which lasted approximately three months during the regular school year. The classes were taught by a Hmong paraprofessional, assisted and supervised by a classroom teacher. The classroom teacher was responsible for planning the curriculum and student activities. The paraprofessional was responsible for carrying out that instruction.

Training was provided for the teachers and paraprofessionals prior to initiation of the program. The training provided background in the theory of bilingual education and language acquisition. It established the goal

of the program to involve students daily in reading, writing, listening and speaking in their primary language. It was recommended that lesson plans include language experience, vocabulary enrichment, and that emphasis be given to reading comprehension skills including higher level questioning strategies. The curriculum was to be thematic and literature based.

The CTBS reading comprehension score was collected for the year prior to the inception of the program as a pre-assessment measure and then for the two consecutive years of the program. Many students who participated in the program did not have a complete set of scores and thus were not included in the experimental group. Likewise, this occurred within the control group. The incompleteness of scores, due to student mobility and inconsistent procedures utilized with testing second language students, caused a diminishing pool of comparison students.

The Reading Readiness Test was administered to the experimental group two times each year, approximately three months apart. The first testing occurred during the second week of the instructional program and the second testing, using the alternate form, was given during the last week of the program. The control group was tested accordingly, following the experimental group by one week. The same procedure was followed for the second year of the program.

The test was administered by the researcher and a Hmong paraprofessional. Dispersed seating was used to insure that students' responses were their own. The test battery required one hour to complete which included instructions first given in English and than in Hmong. If a student requested repeated prompts, it was granted. Students were informed that they should guess at responses when necessary and they could skip the sound discrimination or sight word sections if they did not know those skills. The word recognition and sound discrimination sections were not administered at the kindergarten level because it involved capacities beyond the scope of that grade level.

In order to ascertain which students were to take the Reading Readiness Test, the researcher referenced the CTBS scores. Any students who scored below 15% in the general reading battery or who did not have test scores were noted. A check with the student's teacher was done to determine if the student could or could not read above the primer level so that only those students who were not able to read or were primer-level were included in the Reading Readiness Test.

The items were scored by giving one point for each correct response and no score for incorrect responses. No penalty was given for guessing at responses. If a student scored 100% on all batteries, the second or post test was

not given. In this respect, the students were tested in their English readiness skills.

Both assessments, the readiness test and the CTBS, were intended to measure the pre-reading skills and also the comprehension skills associated with fluency in reading. Hence, the experiment attempted to measure the effect of primary language instruction for both beginning and proficient readers of English.

CHAPTER IV

RESULTS OF THE STUDY

The purpose of the study was to determine if primary language instruction in an after school setting had an effect on measures of English reading readiness or comprehension. The question to be addressed within this chapter concerns whether there is a particular grade level at which Hmong students are positively affected in the development of reading skills by the intervention of Hmong literacy instruction. If such an inquiry were to show improved test performance by the students who receive Hmong instruction, then the transfer of reading skills across languages would be indicated for Hmong-English speaking students in this particular setting.

The Design

The study was designed to measure English reading skills in order to gauge the pre and post effects of primary language instruction for K through fourth grade Hmong students. An experimental group and a control group was established for comparing program participants against non-participants. One test of reading readiness assessed the pre and post skills of both kindergartners and non-readers. A second test of reading comprehension measured the pre and

post skills of students who were able to read above the primer level.

A quasi-experimental design utilizing a two by two factorial analysis was applied. One factor consisted of the experimental and control groups.

The other consisted of the pre and post measures. It was a split plot design in which the pre and post factor contained repeated measures.

Even though results were tracked over a two year period, year one and year two were analyzed separately. The lack of cumulative analyses was due to the nature of the classroom situation in which students opted to attend classes or not without control by the experimenter. (Students could go from control to treatment and vice versa.) This confound limited the analyses to individual and separate data for each program year because the two year participants were inadequate in number to substantiate statistical applications.

Also, it is important to note that the first year represented a preliminary stage for the administration of the test instrument. The Reading Readiness Test had not been used before and therefore its development and stabilization occurred in year one. The results for this year are not reported in this study.

Analyses

Results were generated using a DOS (IBM-style), personal computer running the SPSS PC+ statistical software package. The Means procedure generated average scores for the various comparison groups. The t-test procedure took two forms; one for paired scores, as generated by the pre-post design (each student had a pair of scores), and one for group comparisons, as generated by the control and treatment groups. (The two scores were from different students.) The Harvard Graphics Computer Program created bar charts from the means for comparisons.

Using the generated means, the initial t-test procedure analyzed paired, pre and post scores for each student. (Each student was tested in the same year upon program entry and program completion.) The t-test compared the pre-post scores achieved by each student to determine possible significant improvement for the group as a whole. In this respect, it was determined whether the readiness test was capable of measuring improvement made over a three month, pre-post test period.

The final t-test procedure involved a grouped comparison between students participating in the program (experimentals) with students not participating in the program (controls). In this comparison, each student's rate of improvement, based on his/her beginning score to his/her

ending score, served as the basis for analysis. The pre-post design tested for achievement after exposure to the program.

Together these procedures determined, first of all, if the assessment tool was effective and, second of all, if the program was effective in helping the participants achieve as a direct result of the instruction. It should be noted that due to the problems of unequal N for the groups, an inclusive factorial analysis could not be utilized.

Limitations

CTBS - Reading Comprehension

The CTBS scores collected for the reading comprehension component yielded uneven results. This was beyond the control of the researcher in that students were not consistently tested due to the changing status as second language students during the three years considered (1989 pre scores and 1990 and 91 post scores). The result was an incomplete set of scores for comparison. Specifically, even though there were 29, 58 and 95 aggregate scores collected by years, there were only two in the control group for the years 89 to 90, and 12 in the control group for the years 90 to 91. Likewise, there were 22 and 27 in the treatment group. This led to an unequal N design which would require

an unweighed means analysis of variance which is less sensitive to differences, if in fact there were any.

A second limitation was in the use of NCE scores which are normed measures based upon a national group. The fact that the scores are normed signifies that they are not directly reflective of actual performance but instead are filtered through the performance of the norm group. Only raw scores, which were unavailable, would have given a direct measure of performance.

A third limitation associated with NCE scores concerned the utility of the test when applied to small numbers, and especially with homogeneous groups of second language students. This was apparent when the data consistently yielded low mean scores of 31 points out of a possible 100 with large standard deviations of 18 points for the entire comparison population. Large standard deviations indicate wide fluctuations in scores introducing unwanted error in testing. The performance of ethnic minorities is frequently characterized by this pattern. The lower scores proved to be inadequate discriminators for this population's performance.

The Reading Readiness Test

First of all, the experiment was evaluated with an untried instrument, the Reading Readiness Test. Although this was created expressly for the purpose of this study, a

pilot should have been done to avoid the confound of possible instrument flaws interacting with experimental results.

Second of all, the difficulty of evaluating reading readiness skills is subject to real world constraints. These include: extreme variance in skills of the students particularly where English is concerned, the degree of acculturation due to the length of residency in a new country, and the itinerancy of the subject population. The present study represented a most difficult situation in attempting to establish a longitudinal study of a migrant student population.

Results

For the CTBS measures in reading comprehension, no useful information appeared to be present. Second language, Hmong students, as a whole, do not yield the same results as do English speaking, Anglo students. It is apparent that the CTBS was not intended for comparisons of second language students, especially for those not proficient in English.

As a further examination of the CTBS scores, a correlation was computed with the Reading Readiness Test. The results showed a consistently low correlation which averaged r=-.01. This validated the inherent problems associated with the CTBS scores. Because it was the only

means of assessment for the students who were able to read English, it follows that there was no interpretable data to discern the effects of the instructional program for many of the participating students.

On the other hand, for the Reading Readiness Test, overall, results indicated reading readiness improvement for both the control and treatment groups (pre to post), with the treatment group showing more improvement than the control group. The Reading Readiness Test seemed to be sensitive to performance changes, and was able to distinguish real improvement when present.

Discussion of the Findings

Figure 1 presents the mean scores for the pre and post, paired comparison of the Reading Readiness Test for 1990. The entire population of both controls and treatments improved on three of the four components. Furthermore, word recognition and sight words both were statistically significant ($t = 4.96$; $p < .000$ and $t = 3.47$; $p < .001$ respectively).

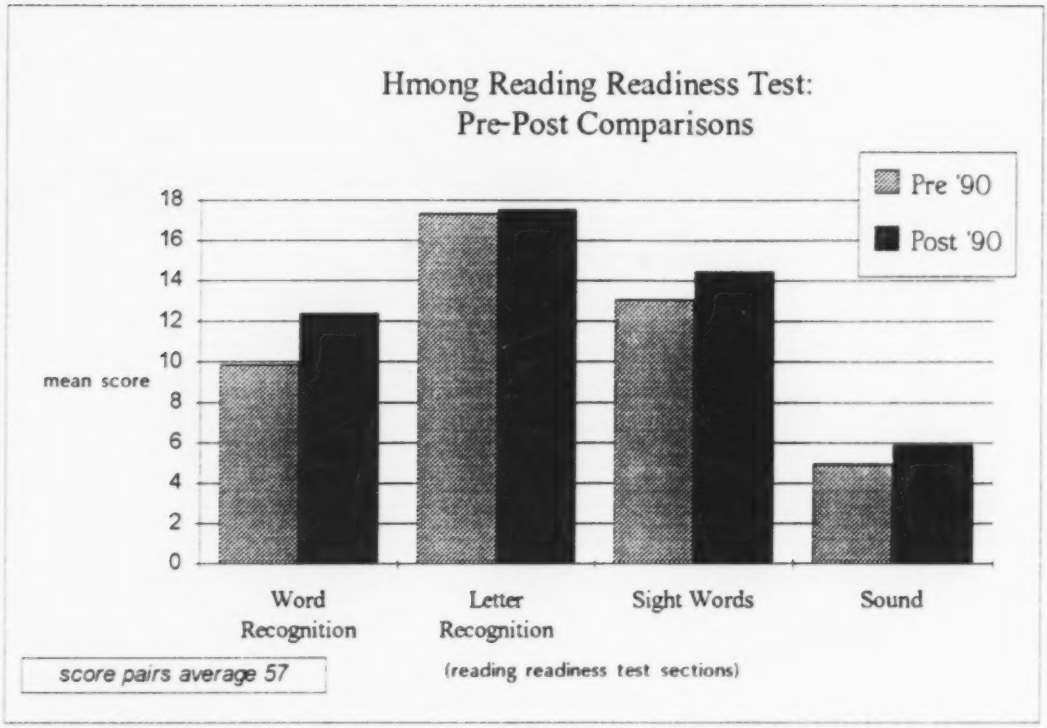

Figure 1. Hmong Reading Readiness Test.

Table 1 displays the mean scores graphed in Figure 1. The significance found with letter recognition and sight words indicated that these components were able to discern improvement over a three month, pre-post test situation. The fact that letter recognition showed no change in the pre to post scores (t = .878; n.s.) indicated that it did not discriminate change in student performance and thus was not an effective tool. The last component, sound, showed an insignificant pre to post gain (T = 1.69; n.s.).

Table 1

Paired Scores for the 1990

Reading Readiness Test

VARIABLE	N	Pre-Test $\bar{x}$	Post-Test $\bar{x}$
Word Recognition	57	9.88	12.39
Letter Recognition	68	17.35	17.54
Sight Words	39	13.05	14.46
Sound	39	4.95	5.87

Figure 2 shows the results of the independent tests for the Reading Readiness Test. Overall it is evident that the treatment group out did the control group in three of the four components.

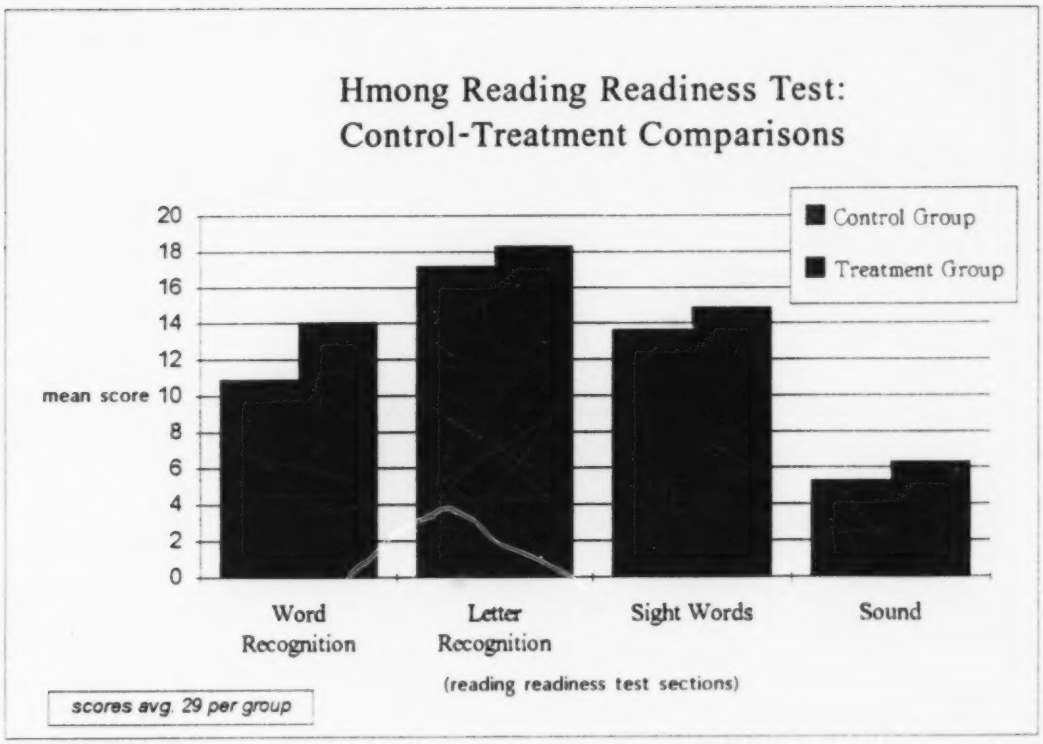

Figure 2. Hmong Reading Readiness Test.

Tables 2 and 3 show the independent mean scores of both groups for the pre and post tests as graphed in Figure 2. The analyses indicate that only the post, word recognition component is statistically significant in favor of the treatment group. The post, sight component, however, showed positive improvement by the treatment group. The range of improvement is noteworthy in that the treatment scored lower than the control group by 2.5 points on the pre-test and then surpassed them by one point in the post test, indicating a mean gain of 3.5 points. As for letter

recognition, no improvement is detected. Lastly, for the sound component, the movement occurred in the wrong direction for both control and treatment groups

Table 2

Group Comparisons for the 1990

Readiness Test - Pre

	Control Group			Treatment Group		
VARIABLE	N	$\bar{x}$	t-test	N	$\bar{x}$	df
Word Recognition	46	11.72	-0.55	30	12.53	68.63
Letter Recognition	56	17.70	-0.74	41	18.24	88.29
Sight Words	32	15.16	1.68	28	12.86	52.25
Sound	38	5.84	-0.28	28	6.11	57.74

After finding improvement with the treatment group when compared to the control group, the final inquiry of this chapter examines specific grade level performance. Tables 4 and 5 report the mean scores for the treatment and control groups on the two tests which measured improvement. These tests were word recognition, which showed statistically significant improvement, and sight words, which indicated a positive trend.

Table 3

Group Comparisons for the 1990

Readiness Tests - Post

	Control Group			Treatment Group		
VARIABLE	N	$\bar{x}$	t-test	N	$\bar{x}$	df
Word Recognition	30	10.90	-2.31	27	14.04	54.34
Letter Recognition	40	17.20	-1.37	36	18.33	73.10
Sight Words	19	13.63	-0.74	23	14.87	37.48
Sound	17	5.29	-0.96	23	6.30	29.37

Table 4

Word Recognition Comparisons

from the 1990 Pre and

Post Readiness Test

	Pre-Test			Post-Test		
GRADE	N	$\bar{x}$	S.D.	N	$\bar{x}$	S.D.
Treatment K	12	8.00	3.05	12	9.42	2.57
Control K	22	6.59	4.10	22	9.54	4.34
Treatment 1st	18	15.56	5.51	15	17.73	3.24
Control 1st	24	16.42	5.61	8	14.63	5.45

Table 5

Sight Recognition Comparisons

from the 1990 Pre and Post

Readiness Test

	Pre-Test			Post-Test		
GRADE	N	$\bar{x}$	S.D.	N	$\bar{x}$	S.D.
Treatment K	1	0.00	0.00	0	0.00	0.00
Control K	1	10.00	0.00	2	9.00	1.41
Treatment 1st	16	14.06	4.15	13	15.31	4.44
Control 1st	21	15.00	5.34	7	10.71	6.60
Treatment 2nd	8	12.88	6.08	8	15.75	5.23
Control 2nd	7	16.29	3.19	7	17.00	3.92
Treatment 3rd	0	0.00	0.00	0	0.00	0.00
Control 3rd	2	14.50	3.54	2	15.00	2.83
Treatment 4th	0	0.00	0.00	0	0.00	0.00
Control 4th	1	17.00	0.00	1	17.00	0.00

For the word recognition component, the groups are relatively stable from pre to post and the number of students are adequate for score comparisons. An improvement of 2.5 points for the treatment group occurred at the first-grade level (n = 18) and +1.5 points (n = 12) for the Kindergarten. The control group on the other hand realized

a higher gain of 3.5 at the Kindergarten level (n = 22) and then a falling score of -2 points at the first-grade level (n = 24 pre and n = 8 post). Even though there are some undesirable factors in the results of this test component, the fact remains that all pre and post groups contained twenty or more students and both treatment groups improved consistently. These factors, as well as the sensitivity of the assessment tool, produced the conditions required to establish significant improvement by the treatment group.

This improvement, however, was not evident for the sight word component. This component was not given to the same number of students because it required a higher skill level. Therefore, more students participated in the word recognition component than in the sight word component yielding smaller groups for the test of sight words.

The improvement of the treatment group for the sight word component appears to be attributable to the gain of four points made by the second grade, treatment group (n = 8). Another treatment group of 16 first graders also improved but only by 1.5 points. In contrast, the first grade control group, consisting of 21 students in the pre-test and seven in the post test, realized a falling score of negative four. It is also noted that inconsistencies in group numbers were prevalent across the grades which included a loss of four treatment students and thirteen

control students. The changing numbers at each grade level and the post-test attrition are cause for concern in reporting a positive trend in favor of the experimental group. It appears that the trend can not be simply based on the improvement made by the experimental group, but also it was related to the control group dropping in performance. Therefore, this component showed a positive trend by the treatment group, yet it is considered unreliable.

In conclusion, the CTBS scores of Reading Comprehension were dismissed as a measure in this study leaving all students who read above the primer level with no means of evaluation. The Reading Readiness Test, used with the students who could not read or could read at the primer level, showed significant improvement by the treatment group in word recognition. The other components of the readiness test which assessed letter recognition, sound identification and recognition of sight words did not reliably indicate improved performance by the treatment group.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

With a growing population of Hmong students in California, it is necessary to incorporate instructional program which can educate them particular to their language needs. Because fluent reading is paramount to academic performance, a program which can achieve accelerated reading in English is essential. The present research attempted to determine if Hmong literacy instruction in an after-school setting would positively influence English readiness and comprehension skills. If so, the findings would be evidence for the transfer of skills and substantiate the need for Hmong literacy instruction in the schools.

Conclusions

The first hypothesis of this study was that second through fourth grade Hmong students who receive 80 hours of instruction in primary language reading will score significantly higher in English reading comprehension as measured by the CTBS than will second through fourth grade Hmong students who do not receive primary language instruction. This hypothesis was not supported and, in fact, there was no discernible indication of the performance

of the treatment group as measured by this instrument. The hypothesis remains untested.

The second hypothesis was that Kindergarten, first grade, and beginning readers who are Hmong students and receive 80 hours of pre-reading instruction in their primary language will score significantly higher on a readiness test than will Hmong students who don't receive primary language pre-reading instruction. This hypothesis was supported to a slight degree by this study. The support was considered weak because only one of the four tested readiness skills proved to be statistically significant for the kindergarten and first grade treatment group. A trend was noted for a second component, but that trend was not substantiated due to the attrition of the pre to post scores.

The question remains whether there was a transfer of reading skills from Hmong to English at the Kindergarten and first grade levels due to the program of instruction. This study does not indicate such a general conclusion. The fact is that the instruction positively affected the performance of the Kindergarten and first grade students, but not to the extent that inferences may be made about CALP or "g" factors associated with reading transfer. This is especially apparent because the readiness skills assessed in this study are not considered to be the higher level cognitive skills associated with fluency in reading and with transfer.

Therefore, although there was significant improvement due to the program of instruction, whether this can be attributed to the processes of transfer from Hmong to English remains unfounded.

The scope of this research did not include the study of beneficial secondary effects often associated with primary language instruction. Individual measures of self-concept or self-esteem as well as perception of cultural prestige and bilingualism might add a needed perspective to this study.

Recommendations

Recommendations for Further Research

Based on the results and conclusions of this study, the following recommendations for further research are made:

1. Different assessment instruments be used for testing students' reading comprehension. Such assessments would include individually administered comprehension tests capable of measuring discrete improvement within grade level reading competencies.

2. Use of affective measures. This addition would be instrumental in determining the students' cultural perception and self-esteem. In this way, the effects of Hmong instruction, which promotes the primary language at school, could be examined.

3. Reliability research for The Reading Readiness Test. This would be done through repeated test administrations which are then correlated using Crombach's Alpha, the most recognized measure of test reliability.

4. Validity research for the Reading Readiness Test. Validity would be tested by correlating the readiness test with the tests from which it was derived. In addition, qualified personnel would rate student answers, item by item, for test correlations.

5. An addition in the number of choice responses for the word recognition component of the Reading Readiness Test. There should be more than three choice responses on the word recognition component to lessen the effect of the guess factor.

6. Research of cultural bias in the Reading Readiness Test. This inquiry would ascertain the sensitivity of the instrument when used with Hmong students. It would examine each test item to determine if there are conflicts with the Hmong cultural perceptions.

7. Inclusion of a larger population for study. The study would be administered in two or more districts instead of just one. This would counter-balance factors of iteneracy and result in a broader and therefore more reliable base of subjects.

8. Inclusion of cultural studies. There is a need for additional study to consider Hmong cultural attributes which might influence classroom performance.

Recommendations For School Personnel

The changing demographics in California schools are producing classrooms of extreme ethnic diversity. Growing within that diversity are the Hmong students who have impacted many school systems across the state. It is critical at this point to assist the Hmong in their transition to the English language curriculum and also to insure their retention of esteem for their own language and culture.

The findings of this study indicated that Kindergarten and first grade Hmong students who read below the primer level in English did better in word recognition skills after receiving instruction in their primary language. As for the students who were able to read in English, no results were reported. However this group should not be dismissed altogether. One must keep in mind that the success of the program lies not only in its ability to improve test performance, but also in its capacity to motivate student learning and broaden students' experience and background. In this respect, the program succeeded for all grade levels. Students attended the program by choice.

They vested an hour a day of their leisure time to pursue the study of Hmong literacy. This popularity of the classes revealed that the program was deemed worthwhile by the students. It added both prestige and esteem for the students to be able to read in a language heretofore developed only orally. In this regard, it is recommended that Hmong literacy instruction be offered for Hmong students at each and every grade level.

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